

Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

TRANSACTIONS

OF THE

ROYAL IRISH ACADEMY,

VOL. XV.



DUBLIN:

PRINTED BY R. GRAISBERRY,
PRINTER TO THE ROYAL IRISH ACADEMY.

1828.

THE ACADEMY desire it to be understood, that they are not answerable for any opinion, representation of facts, or train of reasoning, which may appear in the following Papers. The Authors of the several Essays are alone responsible for their contents.

CONTENTS.

SCIENCE.

 I. On correcting Observations made with Equatorial Instruments. By T. R. Robinson, B. D. M. R. I. A. Professor of Astronomy at Armagh. Read January 10, 1825
at Armagh. Read January 10, 1825
 II. Description of a new Air-pump, with an investigation of the limit of Exhausting Power in various constructions of that Instrument. By T. R. Robinson, D. D. M. R. I. A. Professor of Astronomy at Armagh. Read October 24, 1825
 II. Description of a new Air-pump, with an investigation of the limit of Exhausting Power in various constructions of that Instrument. By T. R. Robinson, D. D. M. R. I. A. Professor of Astronomy at Armagh. Read October 24, 1825
By T. R. Robinson, D. D. M. R. I. A. Professor of Astronomy at Armagh. Read October 24, 1825
at Armagh. Read October 24, 1825
 III. On correcting Errors of the Astronomical Circle by Opposite Readings. By T. R. Robinson, D. D. M. R. I. A. Professor of Astronomy at Armagh. Read December 5, 1825
Readings. By T. R. Robinson, D. D. M. R. I. A. Professor of Astronomy at Armagh. Read December 5, 1825
Astronomy at Armagh. Read December 5, 1825
Astronomy at Armagh. Read December 5, 1825
more of colour Some alow which is more in proper mover.
By The President. Read January 17, 1825
V. Appendix to the foregoing Paper. By The President. Read
May 22, 1826
VI. Theory of Systems of Rays. By W. R. Hamilton, Andrews'
Professor of Astronomy in the University of Dublin. Read
December 3, 1824

	Page
VII. A Phenomenon of the Rainbow, observed by R. Mant, D. D. M. R. I. A., Lord Bishop of Down and Connor, November	9.
14, 1826. Read April 2. 1827 VIII. On the Structure and Mechanism of the Tongue of the Chameleon. By John Houston, Esq. Member of the Royal College of Surgeons in Ireland, Conservator of the Museum, and Demonstrator of Anatomy in the School of Surgery, &c. Communicated by the Lord Bishop of Cloyne. Read April	
28, 1828	177
POLITE LITERATURE.	
1. Remarks on the Irish Language, with a Review of its Grammars, Glossaries, Vocabularies, and Dictionaries; to which is added a Model of a comprehensive Irish Dictionary. By James Scurry. Read October 23, 1826	3
ANTIQUITIES.	
I. Ancient Irish Deeds and Writings, chiefly relating to Landed Property, from the twelfth to the seventeenth century, with Trans- lations, Notes, and a Preliminary Essay. By James Har-	0
diman, Esq., M. R. I. A. Read February 27, 1826 II. On a passage of Giovanni Leoni, commonly called Leo Africanus, mentioning a successful attack upon the Coast of Africa, by a powerful British Fleet, in the tenth century. By John	3
Dunn, Esq., M. R. I. A. Read April 17, 1826	97

		Page
III.	An Essay upon the state of Architecture and Antiquites, pre-	
	vious to the landing of the Anglo-Normans in Ireland. By	
	L. C. Beaufort. A Prize Essay. Read October 22, 1827	101
IV.	Original Letters from James VI. of Scotland and Chancel-	
	lor Maitland, to Robert Bruce, Minister of the Gospel	
	Communicated by William Bruce, D. D. Read May 26,	
	1828	243

LIST OF THE

ROYAL IRISH ACADEMY,

MDCCCXXVIII.

PATRON-THE KING.

VISITER,

CHIEF GOVERNOR OF IRELAND.

PRESIDENT,

Right Rev. John Brinkley, D. D. F. R. S. &c. Lord Bishop of Cloyne.

VICE PRESIDENTS.

His Grace the Most Rev. Wm. Magee, D. D. &c. Archbishop of Dublin.
Joseph Clarke, M. D.
Rev. S. Kyle, D. D. Provost of Trinity College, Dublin.
William Brooke, M. D.

COUNCIL.

COMMITTEE OF SCIENCE.

His Grace the Most Rev. Wm. Magee, D. D. &c. Archbishop of Dublin.

Joseph Clarke, M. D.

Rev. S. Kyle, D. D. Provost of T. C. Dublin.

Rev. F. Sadlier, D. D. S. F. T. C. D.

b 2

Sir Charles G. L. Gièsecke, Professor of Mineralogy, Royal Dublin Society.

Rev. Richard Mac Donnell, D. D. F. T. C. D.

W. R. Hamilton, Esq. Andrews' Professor of Astronomy, Trinity College, Dublin.

COMMITTEE OF POTITE LITERATURE.

Rev. Joseph H. Singer, D. D. F. T. C. D.

Andrew Carmichael, Esq.

Samuel Litton, M. D. Professor of Botany, Royal Dublin Society.

Rev. William H. Drummond, D. D.

George Kiernan, Esq.

Rev. B. Lloyd, D. D. S. F. T. C. D.

Hon. and Rev. John Pomeroy.

COMMITTEE OF ANTIQUITIES.

William Brooke, M. D.

Isaac D'Olier, LL. D.

Rev. Henry H. Harte, A. M. F. T. C. D.

Thomas Herbert Orpen, M. D.

Hugh Ferguson, M.D.

Sir William Betham.

John D'Alton, Esq.

OFFICERS.

TREASURER. W. Brooke, M. D.

Secretaries. Rev. J. H. Singer, D. D. F. T. C. D.

Rev. F. Sadleir, D. D. S. F. T. C. D.

SECRETARY OF FOREIGN CORRESPONDENCE. Sir William Betham.

LIBRARIAN. Rev. William H. Drummond, D. D.

ALPHABETICAL LIST

OF THE

PRESENT MEMBERS

OF THE

ROYAL IRISH ACADEMY.

Those marked * are Members for Life.

A.

James Eglinton Anderson, M. D. M. W. N. H. S.

J. Apjohn, M. D.

* John Ashburner, Esq.

В.

William Bald, Esq. Civil Engineer.

- * Benjamin Ball, Esq.
- * William Ball, Esq.
- * Rev. Charles Bardin.
- * Sir Robert Bateson, Bart.
 John Bayley, Esq. F. R. S.
 Charles Benson, M. D.
 Sir William Betham.

- * Samuel Black, M. D.
- * Bindon Blood, Esq.
- * Rev. Sir F. L. Blosse, Bart.

Rev. Henry Boyd.

Rev. Charles Boyton, F. T. C. D.

- * Right Rev. John Brinkley, D. D. &c. Lord Bishop of Cloyne, President.
- * William Brooke, M.D. V.P.
- * Very Rev. Robert Burrows, D. D. Dean of Cork.
- * Peter Burrows, Esq.
- * Hon. Sir F. N. Burton.

 \mathbf{C} .

John Caley, Esq. F. R. S. S. A. L. S. and H. S.

- * Richard Carmichael, Esq.
- * Andrew Carmichael, Esq.
- * Joseph Carne, Esq. F. R. S.
- * Earl of Carysfort, F. R. S. F. S. A.
- * Hon. Henry Caulfield.
- * George Chamley, Esq.
- * Earl of Charlemont.
- * Earl of Charleville, F. R. S.
- * Richard Chenevix, Esq. F. R. S.
- * John Cheyne, M.D. F. R. S. E. Physician General.
- * Earl of Clare.
- * Rev. Adam Clarke, LL. D.
- * Joseph Clarke, M.D. V.P.
- * Lieutenant Colonel Colby, Royal Engineers, F. R. S. L. and E.
- * William C. Colvill, Esq.
- * Marquess Conyngham.
- * J. R. Corballis, Esq.

Thomas Coulter, Esq.

John Crampton, M. D. King's Professor of Materia Medica.

P. C. Crampton, Esq. LL. D. King's Professor of Common Law, T. C. D.

Thomas Crofton Croker, Esq. F. S. A.

* John Crosthwaite, Esq.

D.

Rev. J. Darley, F. T. C. D.

Edmond Davy, Esq. Professor of Chemistry, Royal Dublin Society.

John D'Alton, Esq,

* Isaac D'Olier. LL.D.

Michael Donovan, Esq.

Rev. W. H. Drummond, D. D.

E.

William Edgeworth, Esq. Civil Engineer.

- * Right Rev. Thos. Elrington, D. D. Lord Bishop of Leighlin and Ferns.
- * Rev. C. R. Elrington, D. D. King's Professor of Divinity, T. C. D. H. Baldwin Evanson, M. D.

F.

Hugh Ferguson, M. D.

- * Rev. Michael Fitzgerald.
- * Right Hon. Maurice Fitzgerald. Right Hon. W. V. Fitzgerald, F. R. S.
- * Simon Foot, Esq.
- * John Leslie Foster, Esq. LL.D.
- * R. Murray Frazer, Esq.

G.

Lord Garvagh.

Rev. Edward Geoghegan.

Sir Charles G. L. Gièsecke, Professor of Mineralogy, Royal Dublin Society.

- * Rev. Thomas Goff.
- * Very Rev. Richard Graves, D. D. Dean of Ardagh.

Robt. J. Graves, M. D. King's Professor of the Institutes of Medicine.

- * Rev. Richard Grier, D. D.
 - G. A. Grierson, Esq.
- * Richard Griffith, Esq. Mining Engineer, Royal Dublin Society.
- * Rev. Hosea Guinness, D.D.

H.

W. R. Hamilton, Esq. Andrews' Professor of Astronomy, T. C. D.

James Hardiman, Esq.

Major General Thomas Hardwicke, F. L. S.

John Harte, Esq.

Matthew Weld Hartstonge, Esq.

Rev. Henry H. Harte, F. T. C. D.

- * William Haygarth, Esq.
- * Henry A. Herbert, Esq.

Right Hon. Sir George Fitzgerald Hill, Bart.

* Colonel Edward Hill.

Rev. Thomas Hincks.

Very Rev. Richard Hood, LL. D. Dean of Kilmacduagh.

- * Henry Hudson, M. D. State Dentist.
- * Arthur Hume, Esq.
- * Robert Hutton, Esq.

J.

Arthur Jacob, M.D.

* Hon. Judge Johnson.
Edward Johnson, Esq.
Right Hon. Henry Joy, Attorney General.

K.

- * Rev. James Kennedy, B. D. F. T. C. D.
- * George Kiernan, Esq.
- * Alexander Knox, Esq.
- * Hon. Thomas Knox.
- * Rev. Samuel Kyle, D. D. P. T. C. D. V. P.

L.

James Lenigan, Esq.

Rev. Dionysius Lardner, LL. D.

- * Earl of Leitrim.
- * Earl of Limerick.

Samuel Litton, M. D. Professor of Botany and Agriculture, Royal Dublin Society.

* Rev. Bartholomew Lloyd, D. D. S. F. T. C. D.

M.

- * James Macartney, M. D. F. R. S. and F. L. S. Professor of Anatomy and Surgery T. C. D.
- * Rev. Richard Mac Donnell, D. D. F. T. C. D.
 - J. Mac Donnell, M.D.
 - J. T. Mackay, Esq.

Gerard Macklin, Esq. State Surgeon.

* Chevalier de Mac Carthy.

- Rev. T. P. Magee, LL. D.
- * His Grace the Most Rev. William Magee, D. D. &c. Archbishop of Dublin, V. P.
- * George Magrath, M. D. Ephraim Mc Dowell, M. D.
- * William Mc Guire, Esq.
 Rawdon Mc Namara, Esq.
 Right Rev. Richard Mant, D. D. Lord Bishop of Down and Connor.
- * Alexander Marsden, Esq.
- * William Marsden, Esq. F. R. S. Henry Marsh, M. D. Rev. J. C. Martin, F. T. C. D. Henry J. Monck Mason, Esq. William Shaw Mason, Esq.
- * Rev. George Miller, D. D.
- * Sir Capel Molyneux, Bart.
- * Rev. Marcus Monck, W. F. Montgomery, M. D.

N.

- * Right Hon. Sir John Newport, Bart.
- * Whitlock Nichol, M. D. Alexander Nimmo, Esq. Civil Engineer.
- * J. H. North, Esq. M. P.

0.

Rev. Andrew O'Beirn.

* John Oldham, Esq. Sir S. O'Malley, Bart. Thomas Herbert Orpen, M. D. Rev. Cæsar Otway.

Ρ.

- * Paul Patrick, Esq.
- * Robert Perceval, M. D. George Petre, Esq. Rev. William Phelan.
- * Henry H. Price, Esq. Hon. and Rev. John Pomeroy.

R.

Right Hon. John Radcliff, LL. D. Judge of the Prerogative Court.

- * Rev. Thos. Romney Robinson, D. D. Professor of Astronomy, Armagh.
- * Rev. J. Cramer Roberts. James Rock, Esq.
- * Earl of Rosse. Edward Ruthven, Esq.

S.

- * Rev. Fr. Sadleir, D.D. S.F.T.C.D. Secretary.
- * Rev. G. V. Sampson.
- * Anthony Semple, Esq.
- * Rev. J. H. Singer, D.D. F.T.C.D. Secretary.
- * Hon. Baron Sir William C. Smith, Bart.
- * Hon. Alexander Stewart.
- * Whitley Stokes, M. D. Professor of Natural History, T. C. D. Rev. Charles Strong.

T.

Rev. John Torrens, D. D. Archdeacon of Dublin. R. Townsend, M. D. Rev. W. Trail, M. D.

- * William Turner, Esq.
- * Lord Trimleston.

V.

N. E. Vigors, Esq. F. L. S. &c.

W.

- * Rev. Richard H. Wall.
- * William Wallace, Esq. Rev. Robert Walsh.
- * Francis Weldon Walshe, Esq.
- * Right Hon. Colonel R. Ward.
- * Thomas Weaver, Esq.
- * William Webb, Esq.
- * Isaac Weld, Esq.
- * Hon. H. R. Westenra.
- * Francis Wigram, Esq.
- * James T. Wilkinson, Esq. Edward Wilmot, Esq. Rev. James Wilson.
- * Rev. James Wilson, D. D.
- * Benjamin Woodward, Esq.
- * Rev. Doctor Woodward.

HONORARY MEMBERS.

Monsieur le President de Virly, Dijon.

R. P. Georgi, Rome.

Annibal Olivieri, Pesaro.

Abbe Amaduzzi.

Abbe Lanzi, Florence.

Sir J. Bernard de Rossi, Parma.

Prince Abbondio Rezzonico.

R. P. A. Don Appian Bonafide, Rome.

Signior Lampredi.

M. P. F. Suhm, Copenhagen.

Grim Johnson Thorkelin, Copenhagen.

Mr. John Gadolin.

James Boudoin, esq.

Marquess Vinuty.

Monsieur de Grand Maison.

Count of Campomanes.

Monsieur le Baron de Lisle.

Abbe Cessarotti, Padua.

Monsieur le Compte Paul Andriani, Milan.

Baron de Buchler.

Lieutenant Wilford, Benares.

Don Pietro Napoli Signorelli.

Il. Principe Giacomo Giustiniani.

Sir Humphrey Davy, Bart.

Dawson Turner, Esq. Yarmouth.

Signior Bononi, Boulogne.

W. R. Clanny, M. D. F. S. A.

Nicholas Carlisle, Esq.

Nathaniel Bowditch, LL. D.

Monsieur Dupin.

Doctor Hope

Francis Hamilton, M. D.

Frederick Colladon, M. D.

Professor Antonmaria Vassali-Eandi.

W. Hyde Wollaston, M. D. Vice President of the Royal Society.

Thomas Young, M.D. F.R.S.

Baron Jacquin, Professor of Botany, University of Vienna.

David Brewster, LL. D. Secretary Royal Society of Edinburgh.

Robert Southey, LL. D.

Baron Frederick Schreibers, Director of the Imperial Museum, Vienna.

Professor Schumacher, Copenhagen.

Professor Jameson, Edinburgh.

Sir Walter Scott, Bart.

Professor Brogniart, Paris.

Sir John Phillipart, K. G. V. K. P. S. &c.

William Jackson Hooker, LL. D. Glasgow.

R. K. Greville, LL. D. Edinburgh.

Baron de Goethe.

C. Babbage, Esq. F. R. S.

F. W. Hershell, Esq. F. R. S.

Captain H. Kater, F. R. S.

Fr. Bailey, F. R. S. President of the Astronomical Society of London.

James Norris Brewer, Esq.

Robert Brown, Esq. F. R. S. and F. L. S.

Duke of Buckingham and Chandos.

J. South, Esq. F. R. S.

C. C. Rafn, Phil. Dr. Secretary of the Royal Antiquarian Society, Copenhagen.

Aylmer Bourke Lambert, Esq. V. P. of the Lin. Society.

The Reader is requested to make the following corrections:

```
Page. Line.
```

Essay. Volume.

3 69 3, for Dec. 3, read Dec. 13.

11, for upom read upon.

7 73 12, for points read its points.

8 74 3, 4, dele quatain.

24, after ellipses or hyperbolas at which the density is constant; add the axes of these curves may be considered as natural axes of coordinates.

16 82 2, for cos. ey, dy read cos. ey. dy.

16, for
$$\frac{d\varrho}{dz} = -\cos \varrho x$$
, read $\frac{d\varrho}{dz} = -\cos \varrho z$.

20 86 12, add and each ellipsoid or hyperboloid thus moving will in general have two such enveloppes.

22 88 3, after cutting the final rays perpendicularly, add these spheres will also have another enveloppe, perpendicular to the incident rays.

26 92 23, for
$$\gamma$$
, $\frac{d^2V}{dx.dx}$, read γ . $\frac{d^2V}{dx.dx}$.

30 96 8, for gives, read give.

31 97 2, for
$$\frac{d^2V}{d^2y}$$
, read $\frac{d^2V}{dy^2}$.

32 98 5 from bottom, for a Y, read d Y.

33 29 formula (U), for
$$\frac{\cdots - (dx + pdz)}{\cdots - (dy + qdz)}$$
, read $\frac{\cdots - (dy + qdz)}{\cdots - (dx + pdz)}$.

35 101 22, for eyt', read ey's'.

39 105 13, insert commas after $\frac{-1}{\xi_1}$ and $\frac{-1}{\xi_2}$.

in equation of projecting plane, for $z' - g^2$ read $z' - g_2$.

41 107 4, for (D'), read (E')

43 109 17, for in, read infinite. last line, for (VII) read (VI).

45 111 7, add combined with the formulæ of [27.]

10, for [27.] read [29.]

49 115 9 from bottom, for (C") read (G")

VOL. XV.

```
Page. Line.
```

Essay. Volume.

50 116 19, for
$$(\alpha, \beta', \gamma')$$
 read $(\alpha', \beta', \gamma')$.

52 118 2, for
$$\frac{d\alpha}{da}$$
 read $\frac{d\alpha}{da} = .$

6 from bottom, after the comma add &c.

54 120 18, for
$$(a, \beta, Y)$$
, read (α, β, Y) .

55 121 formula (O"), for
$$\frac{d^2 Y}{da^2}$$
, read $\frac{d^2 Y}{da^2}$.

57 123 4, for
$$\frac{d^2V}{r^2}$$
, read $\frac{d^2V}{dr^2}$.

6 from bottom, for (xz), read (yz).

58 124 3, for
$$R$$
, R'' , read R' , R'' .

7, after parenthesis, add or when the focus is a point of spheric curvature on its own caustic surface.

19, for
$$\beta^2$$
 read β_i^2 .

61 127 14, for
$$\frac{d^3V}{du^3}$$
 db², read $\frac{d^3V}{du^3}$ db³.

65 131 in formula (M"), for
$$(g'' - F''_1)(g'' - F''_1)$$
, read $(g'' - F''_1)(g'' - F''_2)$.
2 from bottom, for curvature, read curvatures.

75 141 in
$$(I'''')$$
, for $Q^{(c)}$, read $Q^{(c)}$.

76 142 2 from bottom, for
$$\varepsilon = 2\xi^2 \cdot C^{-1}$$
, read $\varepsilon = 2\xi_2^2 \cdot C^{-1}$.

77 143 6 from bottom, for the negative end, read what may be called the negative end.

91 157 in
$$(E^{(6)})$$
, for $[0]^{-(n-\tau)}$, read $[0]^{-(n'-\tau)}$.

93 159 in
$$(O^{(6)})$$
, for $[\tau - \tau']^{n-\tau-s+1-\tau'}$, read $[\tau - \tau']^{n'-\tau-s+1-\tau'}$.

103 169 1,
$$for - \frac{da}{dx} \cdot \frac{da}{dy}$$
, $read - \frac{da}{dx} \cdot \frac{db}{dy}$.

in (L(8)), for
$$By - Cx$$
)2, read $(By - Cx)^2$.

SCIENCE.

VOL. XV.

* B

POLITE LITERATURE.

VOL. XV.

CONTENTS.

GRAMMATICAL TREATISES.

				AGE
Uraicept ne n-Eigeas,	MS	• • • • • • •		
O'Molloy's Irish Grammar	Rome,	1667	********************	15
Lluyd's do				
Mac Curtin's do				
Vallancey's do				
Haliday's do				
Neilson's do				
O'Brien's do				
O'Reilly's do		1821	***************************************	44
GLOSSARIES AN		•		56
O'Dugan's do				
O'Clery's do				
Lluyd's Dictionary,				
Mac Curtin's do.				
O'Brien's do.		1768		62
Shaw's do	London	, 1778		63
Vallancey's Prospectus				
O'Reilly's Dictionary		1821	••••••	65
Model of an Irish Dictionary, &c		••••••	•••••••	73
Specimen of correct Orthography and	Gramma	r		81

ANTIQUITIES.

vol. xv.

В